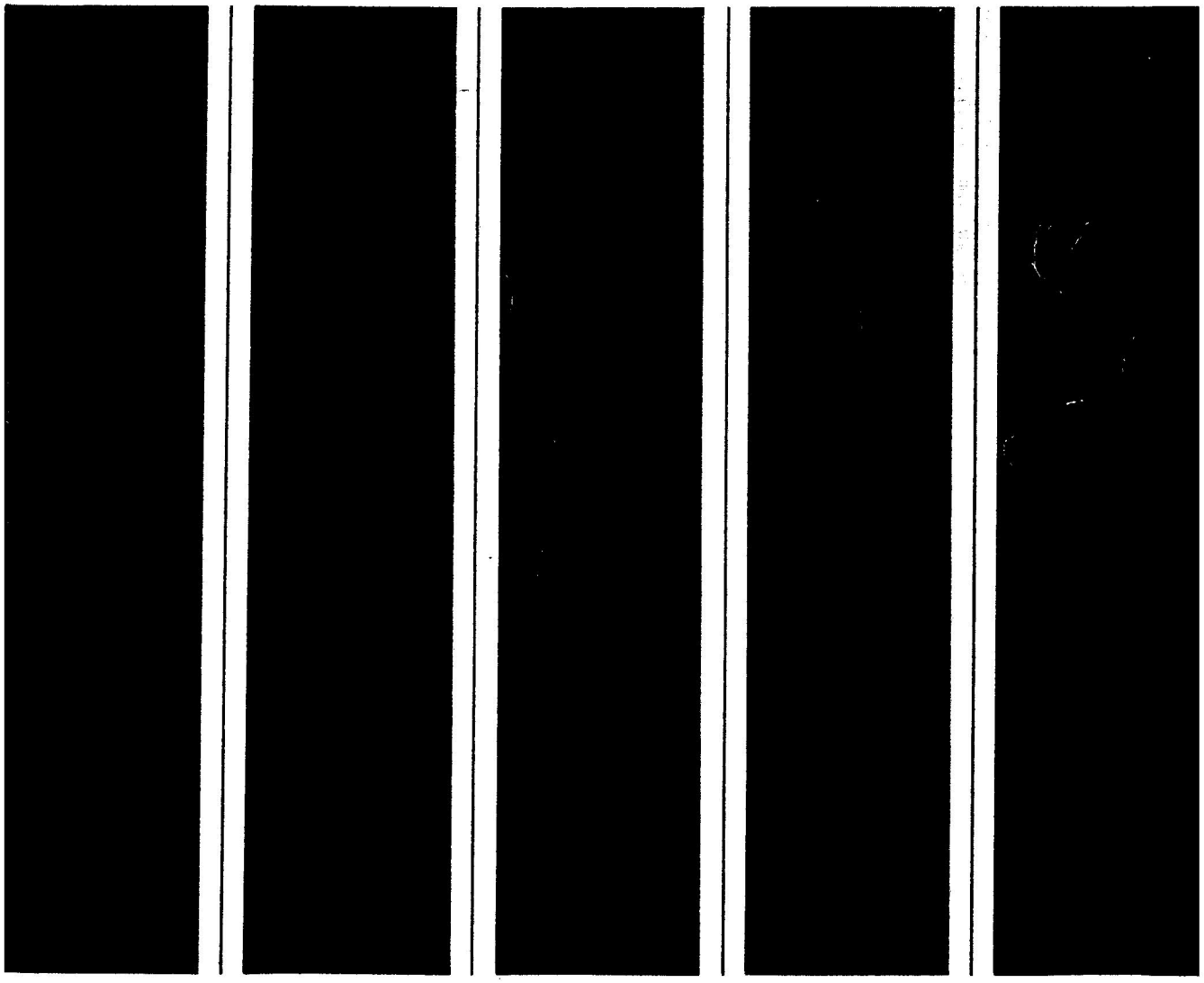
Price $6.00

Service Manual
AM/FM Stereo Receiver

370R



SCOTT®
The Name to listen to.

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CAUTION NOTICE

The following safety precautions must be followed to assure continued reliability and safety against fire and shock hazard:

1. Replacement parts used during servicing of this appliance must have identical characteristics as those offered and recommended by H. H. Scott, Inc.
2. A dielectric test is to be performed on each appliance following the re-assembly and before returning the unit to the custmer.
3. The dielectric test to be performed on H. H. Scott, Inc, electric components serviced in the United States and Canada for use in these countries shall consist of not less than the following:*
   1) A dielectric tester designed to supply not less than 1100 volts at 60 Hz and employing leakage current indicator(s), is to be used.
   2) The tester is to be connected per the instructions enclosed with the instrument, or as follows:
      a. The tester is connected to the power line receptacle and the power switch is turned on.
      b. Sufficient time is allowed for the tester supply to stabilize and then the output voltage is adjusted for 1080V.
      c. Leads of the tester, usually marked GND and HV, are connected between chassis ground and both blades of the male plug of the power cord.
      d. Switch tester to "test" and observe leakage indicator. **Leakage current must not exceed 5.0 mA.**

* Dielectric tests made by service personnel in countries other than USA and Canada must use test equipment and procedures specified by the safety agency serving that country.

SPECIFICATIONS

FM Section

Tuning range
87.5 to 108 MHz
IHF sensitivity
10.3 dBf/1.8 μV
50 dB quieting sensitivity
Mono: 16.1 dBf/3.5 μV
Stereo: 36.3 dBf/36 μV
S/N ratio at 65 dBf
Mono: 75 dB
Stereo: 70 dB
Distortion at 65 dBf
Mono: 0.125%
Stereo: 0.25%
Frequency response ±2 dB
25 Hz – 15 kHz
Capture ratio
1.25 dB
Alternate channel selectivity
60 dB
Image rejection
65 dB
Stereo separation at 1 kHz
45 dB
Spurious response rejection
80 dB
Subcarrier rejection
60 dB
IF rejection (98 MHz)
85 dB

AM Section

Tuning range
515 to 1620 kHz
Usable sensitivity (at bar ant.)
250 μV/m
S/N ratio
50 dB
Selectivity (1 MHz)
45 dB
Image rejection
60 dB

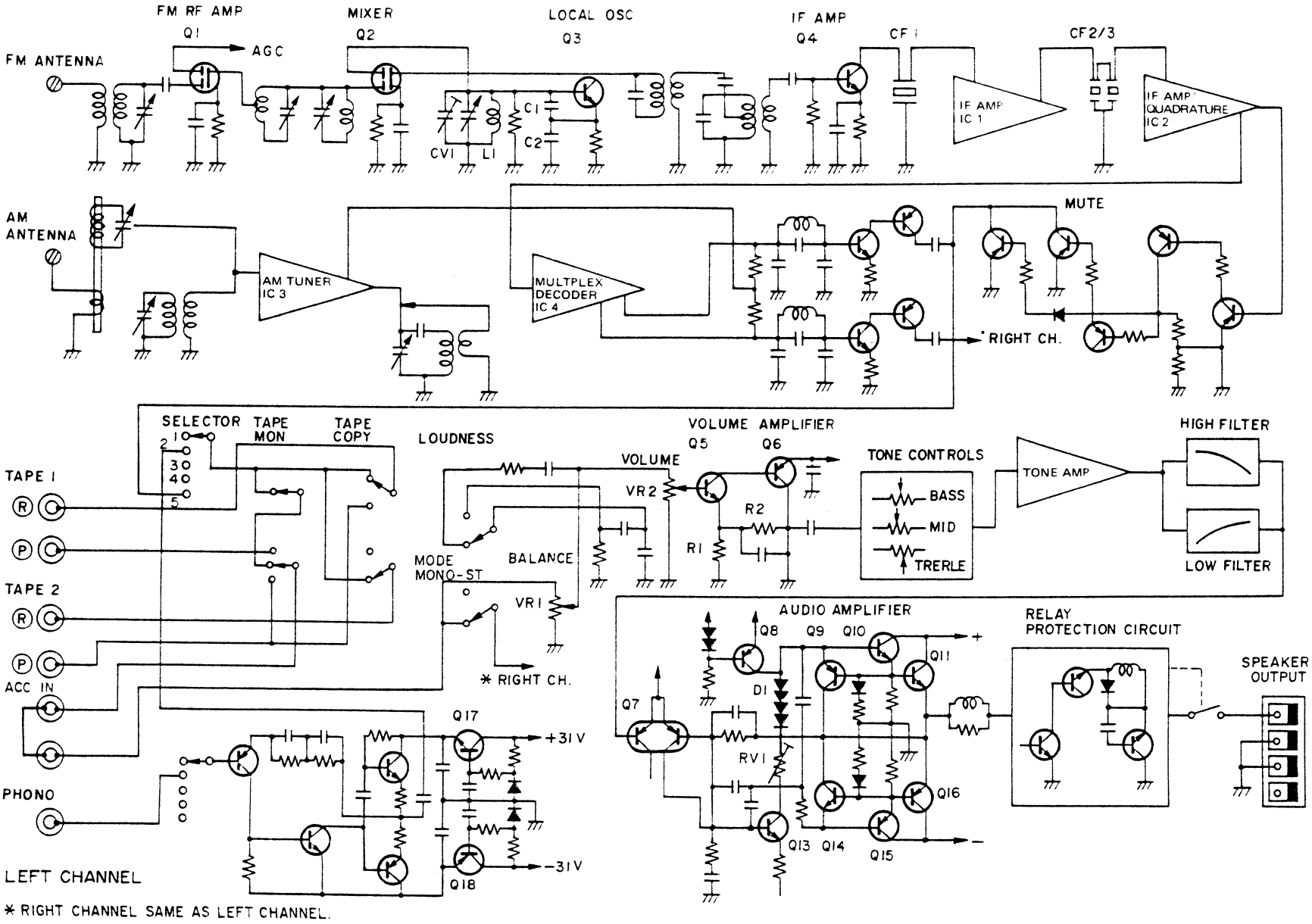
Amplifier Section

Minimum continuous RMS output power per channel, both channels driven into 8 ohms from 20 Hz – 20 kHz with no more than rated THD
60 Watts
THD at rated output
0.05%
THD at 10 watts, 20 Hz – 20 kHz
0.03%
IMD at rated output
0.05%
Input sensitivity
Phono: 2.5 mV
Others: 150 mV
S/N ratio weighted, input shorted
Phono (re: 10 mV RIAA 1 kHz): 85 dB
Others: 90 dB
Frequency response
Phono RIAA 20 Hz – 20 kHz: ±0.5 dB
Others at 1 watt 20 Hz – 20 kHz: ±0.5 dB
Phono overload
200 mV
Tone control range
Bass: ±10 dB at 100 Hz
Mid: ±6 dB at 1 kHz
Treble: ±10 dB at 10 kHz
Filters
High: 8 kHz 6 dB/oct.
Low: 30 Hz 6 dB/oct.
Loudness compensation at – 30 dB
+3.5 dB at 10 kHz
+ 7 dB at 100 Hz
Channel separation
Phono 1 kHz: 60 dB
Others 1 kHz: 60 dB
Crosstalk (1 kHz)
60 dB
Damping factor (1 kHz) 8Ω
>60

General Specifications

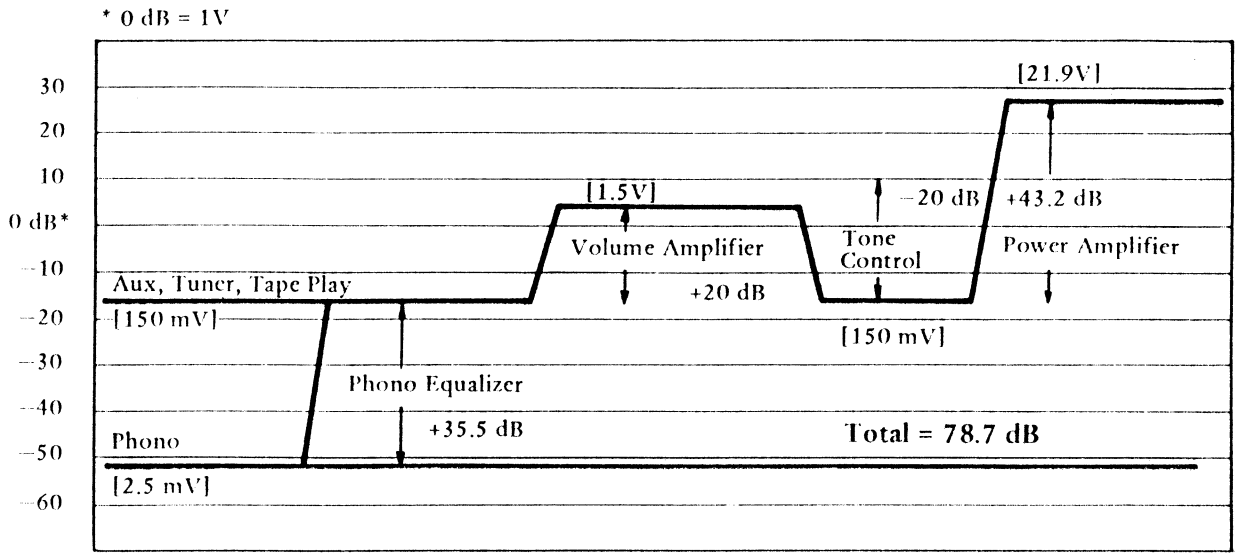
Line voltage and frequency
117V AC 60 Hz (USA/Canada version)
100V/117V/220V/240V, switchable AC 50/60 Hz (European version)
Power consumption
US/Canada: 180W, Europe: 460W
Dimensions – H/W/D
6"/20-3/4"/11-13/16", 152/530/300 mm
Net weight
35.5 lbs, 16.0 kgs

BLOCK DIAGRAM



* RIGHT CHANNEL SAME AS LEFT CHANNEL.

AUDIO LEVEL DIAGRAM



CIRCUIT DESCRIPTION

FM Front End (Refer to Block Diagram)

The FM front end consists of a tuning circuit using a 4-gang variable capacitor, a tuned RF amplifier, a local oscillator, and a mixer. The RF amplifier (Q1) is a dual gate MOSFET in which gate 2 is AC grounded, providing high RF amplification. The output from this stage is fed to the mixer stage, Q2. The local oscillator is also fed to the mixer. Q3 is connected in a Colpitts oscillator configuration, in which the resonant frequency is determined by the tank circuit consisting of CV7, CT7, and T4. The variable capacitor section, CV7, varies the oscillator frequency so that it is always 10.7 MHz above the received incoming signal.

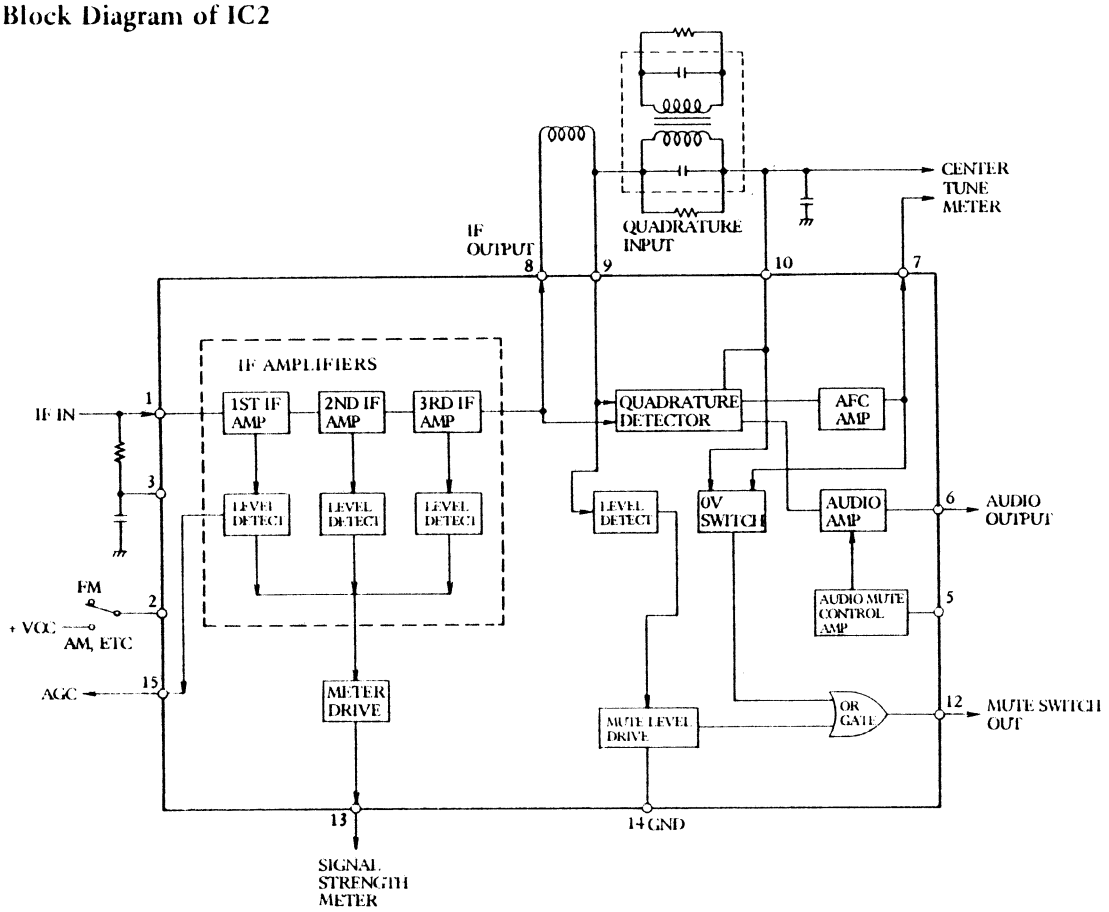
FM IF Section (Refer to page 6)

The FM IF stage is composed of a transistor amplifier, 3 dual element ceramic filters, and 2 integrated circuits. IC1, μPC555H is a differential amplifier which provides an extra stage of gain. IC2, HA11225 contains IF limiter amplifiers, meter drive and muting circuits, and a quadrature detector (see block diagram, page 6). The IF amplifier is composed of three direct-coupled amplifier/limiter stages. The limiter output, which is fed directly to a quadrature input, also appears at pin 8, where it is phase shifted through L2 and reapplied to the other quadrature input at pin 9. Two audio signals opposite in phase are obtained from the quadrature detector. These signals are converted to single ended outputs by two separate amplifiers. The output of the first amplifier (pin 7) is a DC level which varies with detuning and is used as the drive for the center tune meter. The output from the second amplifier (pin 6) is the composite signal which is fed derectly to the multiplex. This model utilizes a discrete audio muting circuit, where the drive for the muting circuit appears at pin 12 providing a positive voltage in the event of a low IF input level or greater than ±70 kHz detuning. Signal strength meter drive at pin 13 is derived from 3 peak detectors which sense and sum the signal levels of the three IF amplifiers.

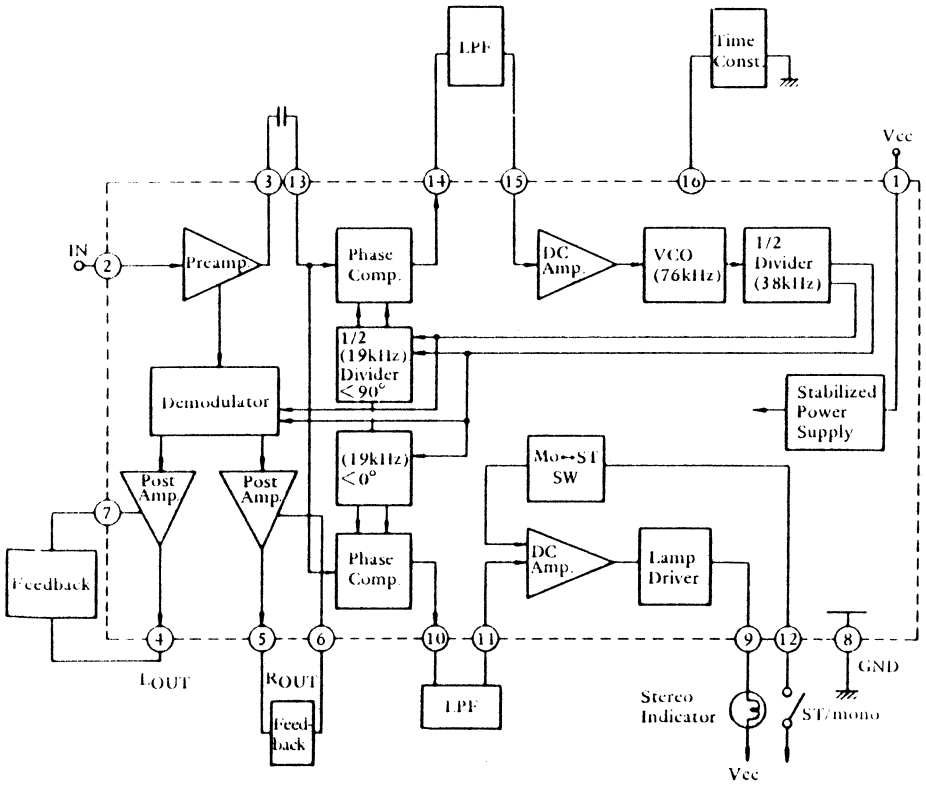
Multiplex Decoder (Refer to page 6)

The multiplex decoder IC (HA1196) is functionally divided into 2 sections: The phase locked loop (PLL) signal generator, and the stereo demodulator. The PLL consists of a 76 kHz voltage controlled oscillator (VCO) followed by two frequency dividers, producing 38 kHz and 19 kHz. The phase of this signal is compared with the phase of the incoming pilot signal and a difference signal is created which corrects the VCO and synchronizes the VCO signal to the pilot signal. Since higher order harmonics are contained in the phase difference signal, a low pass filter is used to eliminate these harmonics. A second

Block Diagram of IC2



Block Diagram of IC4

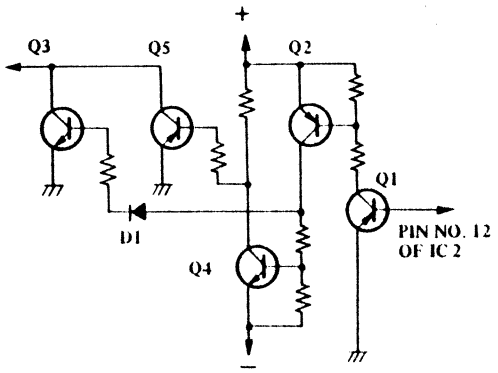


phase comparator is used to sense when the PLL is locked to a pilot signal. The output of this comparator triggers the stereo indicator and connects the 38 kHz switching signal to the demodulator. This control circuit will be blocked when a positive voltage appears on pin 12 since it is connected to the muting signal of the FM IF. Thus, when the conditions for muting exist, pin 12 is positive and the unit is locked in mono operation.

The demodulator circuit consists of two differential amplifiers operating in a switching mode controlled by the phase locked 38 kHz signal which demodulates the composite incoming signal into left and right outputs. These signals are connected to negative feedback audio amplifiers in which the gain is set by external resistors. From the IC, the signal is fed to the 19 kHz filters, then to the discrete mute circuit and the output jacks.

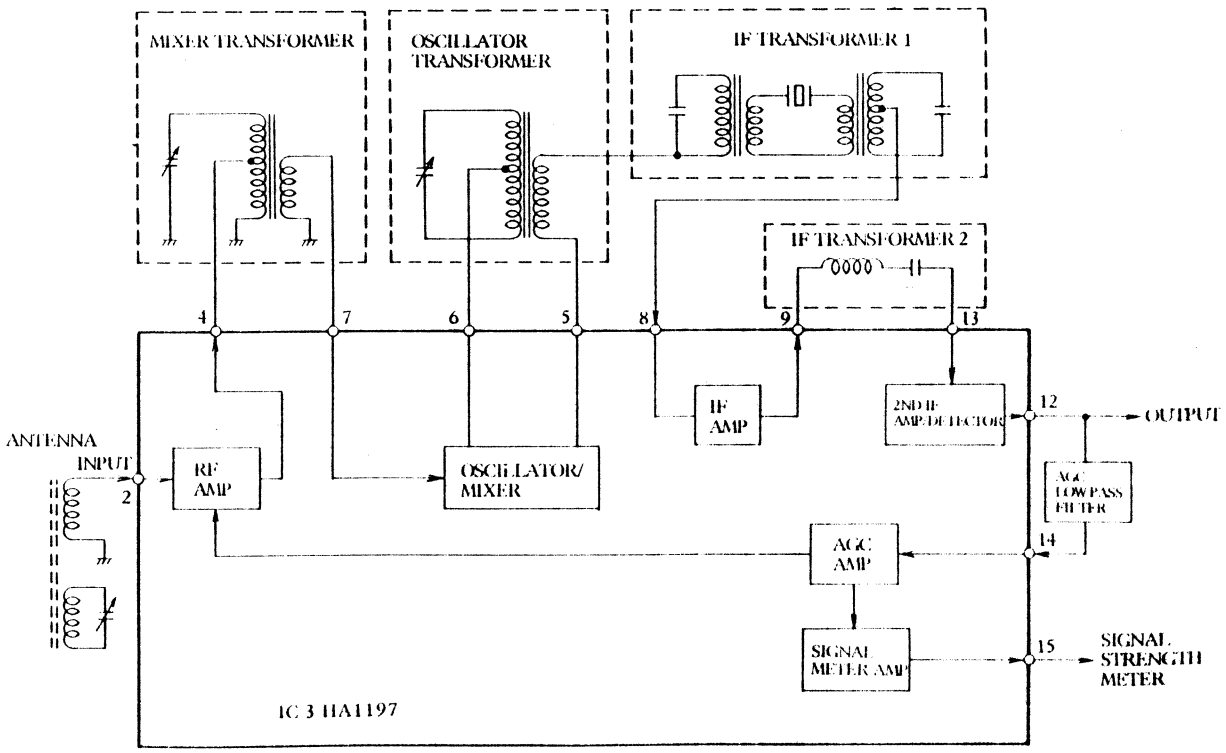
Mute Circuit

The mute drive block integrated into IC2 provides a control voltage at pin 12 for the external mute circuit comprised of Q10, 11, 12, 13, 14, 15 and 16.
With reference to the simple schematic shown to the right, when a plus DC appears at the base of Q1, Q1 will conduct, this inturn activates Q2 and, through diode D1, Q3 wil conduct, shorting the audio output of the tuner section to ground. An additional feature of this mute circuit is the use of Q4 and Q5 to eleminate impulse type noise when the unit is switched on or off. Under normal operating conditions Q5 is not conducting, however if the plus or minus supply voltages are upset Q5 will conduct muting the audio output.



AM Tuner Section

The AM incoming signal received at the AM antenna enters the RF section of IC3, is amplified and coupled to the converter stage, here the signal is changed to the universal 455 kHz intermidiate frequency.
The local oscillator operating 455 kHz above the incoming tuned signal is achived in the converter block in the IC with externally connected T12.
The 455 kHz signal is coupled, through two stages of IF amplification, and to the detector, the detector output then appears at pin 12 as audio information. The signal is then conducted through the low pass filter to further remove the 455 kHz component.

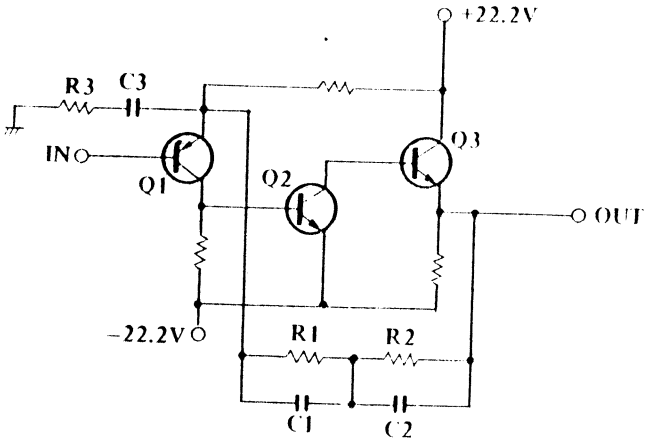


Phono Preamplifier

This is a negative feedback type of phono equalizer, it consists of three low noise transistors per channel. Open loop gain of the circuit is 86 dB. Negative feedback for gain adjustment and equalization is provided by resistors R1, and R2 and capacitors C1 and C2 connected between emitter of Q3 and emitter of Q1 giving a gain of 35.5 dB @ 1 kHz.

Units produced for use in Europe include circuitry to provide playback equalization conforming to IEC standards publication 98 amended September 1976 ie: + 16.3 dB @ 50 Hz, - 13.7 dB @ 10 kHz. Units produced for North America provide playback equalization conforming to RIAA standards ie: + 16.9 dB @ 50 Hz, 13.7 dB @ 10 kHz.

Additional rolloff below 30 Hz required by IEC standard is provided by C3. The circuit is powered by a split power supply of ±31V to provide an over load capability of greater than 200 mV at 1.0 kHz.



Volume Amplifier (Refer to Block Diagram)

The signal from the Volume control, VR2, is amplified 20 dB by the directly connected amplifier stage consisting of Q5 and Q6 (Q1 and Q2 in schematic). Gain is set by the ratio of R1 to R2.

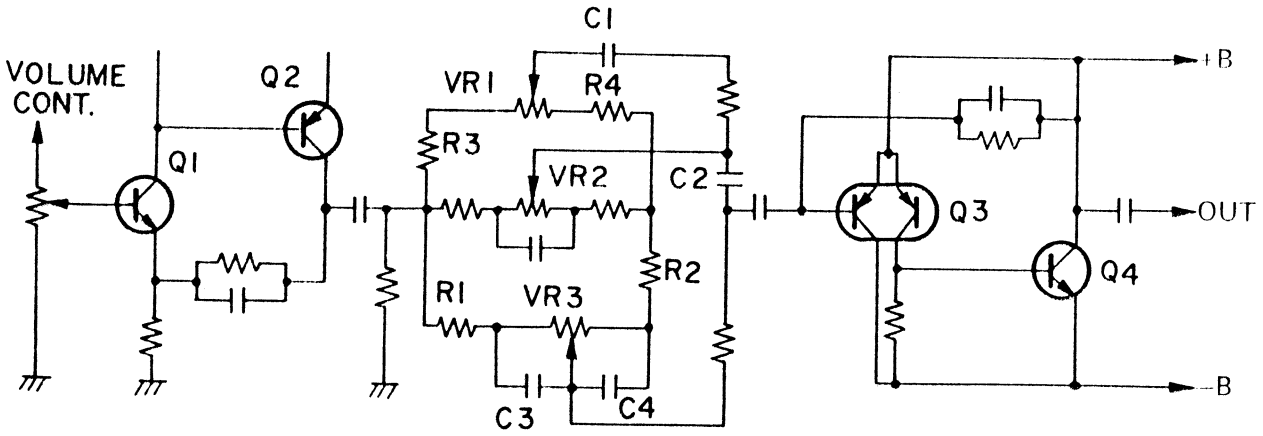
Tone Control

The tone control circuit is a negative feedback type which utilizes differential amplifier Q3 and emitter follower Q2 as the active elements. That is, the gain of Q3 is controlled by the tone control circuitry.

Mid Tone Control: At 1 kHz the bass and treble controls have little effect on the gain since the impedance of capacitor C1, is high which effectively removes VR1 from the circuit. Impedance of capacitors C3 and C4 is low, effectively shorting VR3 thus at midrange frequencies near 1 kHz the gain is mainly determined by the position of VR2.

Bass Tone Control: As the frequency decreases below 1 kHz, the impedance of C3 and C4 increases proportionally. At very low frequencies, C1 and C2 are effectively open, removing VR1 and VR2 from the circuit. Thus at low frequencies, the gain is mainly determined by the position of the Bass tone control VR3. Rotation towards R1 will boost the low frequencies, while turning it towards R2 will cut the bass.

Treble Tone Control: At high frequencies, VR2 and VR3 are effectively short circuited. At these frequencies, however, C1 impedance decreases, so that VR1 becomes the main control of the circuit gain. Rotating VR1 towards R3 will boost the treble, while turning it towards R4 cut the treble response.



Power Amplifier (Refer to Block Diagram)

This circuit is an OCL, fully complementary amplifier. The input stage consists of a differential amplifier (Q7) and a voltage amplifier (Q13). The voltage amplifier provides voltage swing to nearly full plus and minus supply. Current gain is then provided by the fully complementary Darlington paris of Q10 + Q11 for the positive swing, Q15 + Q16 for the negative swing. The output stage bias is set by D1 and R
The output stage is protected from short circuit and overl
by transistors Q9 and Q14, etc, which short out the driv
signal when current through the output transistors reac
an excessive level.

Power Supply (Refer to Block Diagram)

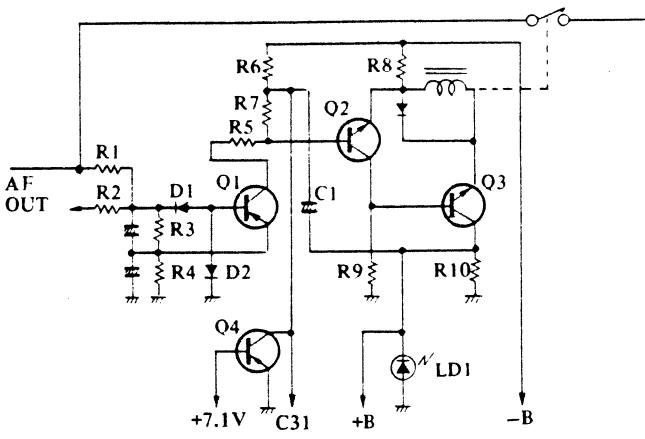
The main power supply (±46V) consists of a full wave bridge rectifier and two 10,000 μF capacitors. The B+ and B− regulators (Q17 + Q18) supply ±31V for the phono pream
fiers.

Replay Protection Circuit

This circuit protects the speakers from the possibility of DC potential at the amplifier outputs, as well as eliminating transients during turn on or turn off.

Turn On/Off: When the unit is first switched on, Q2 quickly turns on, holding Q3 off. After several seconds, determined by the charging time of C1 through R6, Q2 turns off, thus turning on Q2 and activating the relay which connects the audio output to the speakers. At turn off, Q4 immediately turns on, which turns Q2 on and Q3 off, instantly opening the speaker relay.

Center Point Potential Detect: This circuit, composed primary of Q1, D1 and D2, protects the loudspeakers from DC at the amplifier output. When excessive plus or minus DC appears at R1 or R2, Q1 turns on, which activates Q2 and opens the speaker relay. At the same time, LD1, the front panel Protection indicator, is activated.



ADJUSTMENT

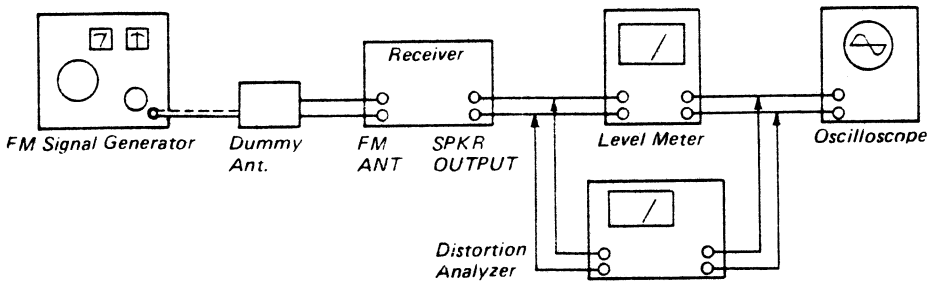
(Refer to Adjustment Location: Page 12)

HDQ-C1CY

Equipment Required

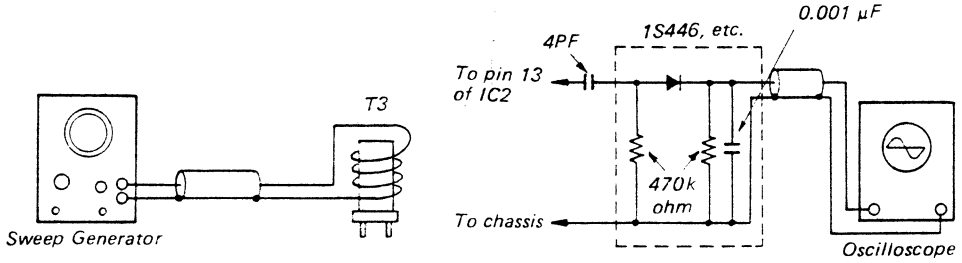
Audio signal generator.
Level meter.
Oscilloscope.
Digital frequency counter, 0—100 kHz.
FM multiplex signal generator.
Circuit tester.

FM RF Tracking

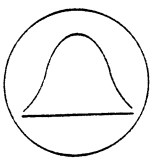


1) Apply 90 MHz, 1 kHz and 100% modulated, 65 dBf signal with 76 kHz deviation to the FM antenna terminal.
2) Tune the unit to 90 MHz.
3) Observe the oscilloscope connected to the Speaker output terminal for synmetrical sine wave. If failed, adjust T4.
4) Adjust T1 through T3 for maximum level meter reading (connected in parallel with the scope).
5) Adjust the signal generator for 106 MHz, and retune the unit.
6) Repeat 3), adjusting CT7, if necessary.
7) Adjust CT1, CT3 and CT5 for maximum level meter reading.
8) Repeat above procedure again until no further improvement is obtained.

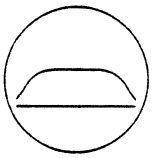
FM IF Amplifier



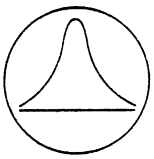
1) Mute the FM local oscillator by shorting CV7.
2) Apply 10.7 MHz signal from the sweep generator to T3 in the manner shown as above.
3) Adjust T5 and T6 for correct figure as provided below. It may be necessary to increase or decrease the sweep generator output for adjustment convenience.



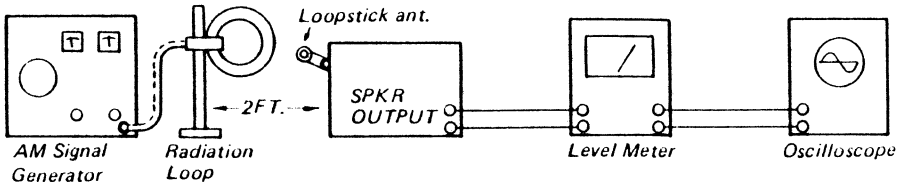
Correct



Incorrect, as too low



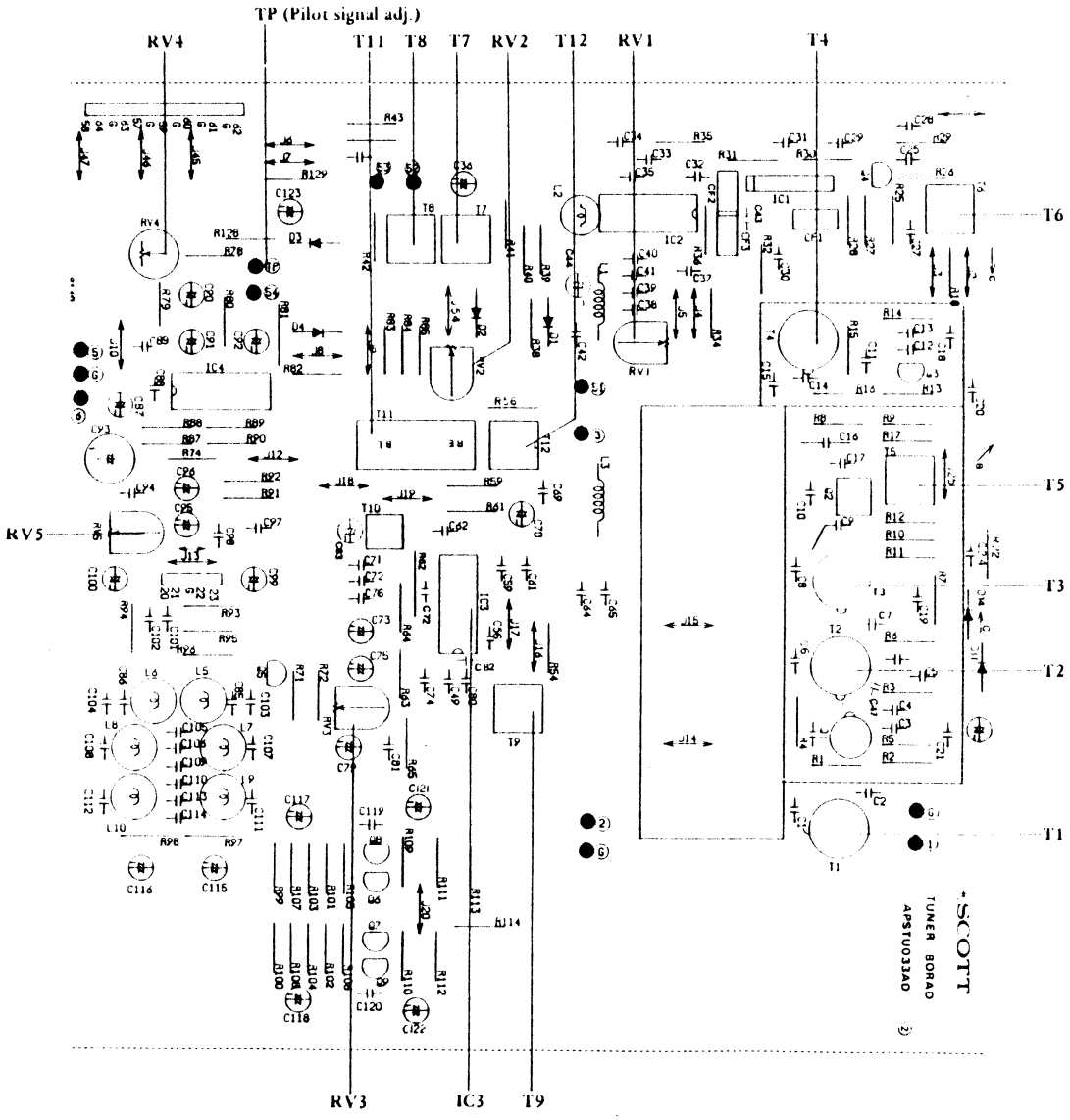
Incorrect, as too narrow



meter goes off scale. In this case, always decrease the signal generator output for proper level. Do not change voltmeter range. Always keep the generator output as low as possible to avoid AGC action and to keep the measurements accurate.

4) Adjust the AM loop stick antenna core and T9 core for maximum output on the voltmeter.
5) Shift the generator frequency to 1400 kHz with same modulation condition. Retune the unit.
6) Adjust CT4 (dial frequency alignment) + CT2 + CT6 (tracking) for maximum output.
7) Repeat above procedure at both frequencies, until no further improvement is obtained.
8) Verify the dial frequency indication at 1,000 kHz for accuracy.

Adjustment Location (RF Section)



Audio Adjustment

Equipemtn Required

Audio Signal Generator.
Speaker load resistor, 8 ohms, 100 watts, noninductive.
Digital voltmeter or ammeter.

Bias Adjustment

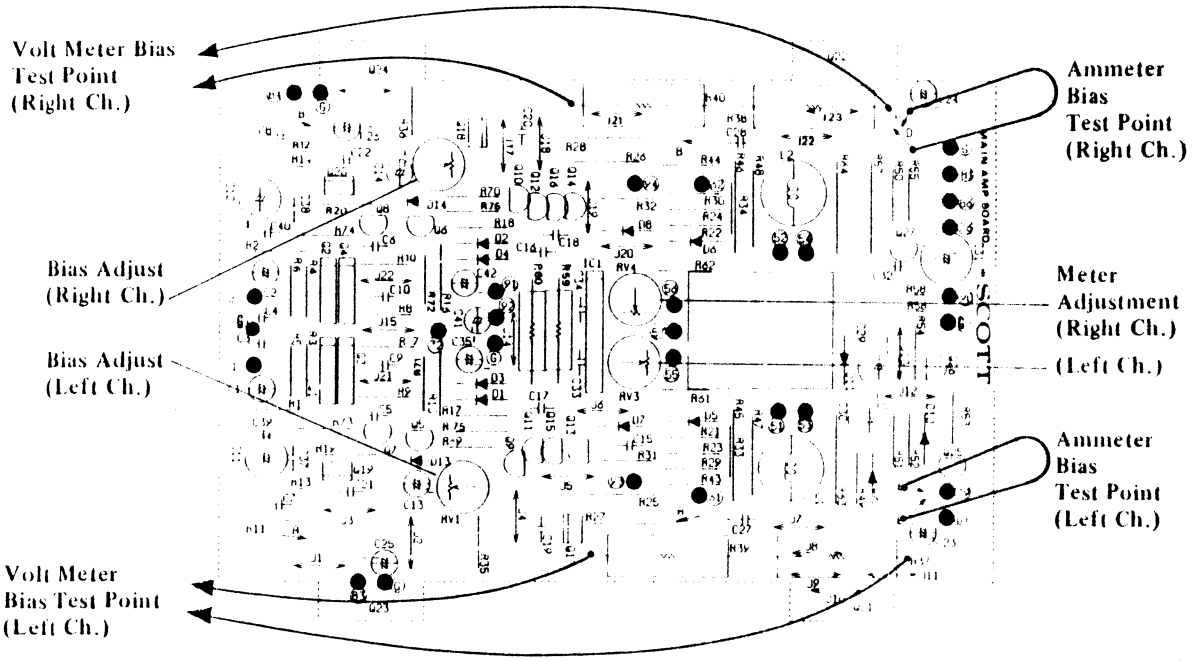
The following adjustments are the same for both the left and right channels.

1) Connect 8 ohm resistors to the speaker A terminals, and set the Speaker Mode switch to A position.
2) Turn the Volume control fully counterclockwise.
3) Turn RV1 fully counterclockwise.
4) Depending on available equipment, use A or B:
   A. Set the digital voltmeter to most sensitive range. Connect probes across R37 and R39 (voltmeter bias test point, left channel). Turn unit on. Let it idle at least one minute. Adjust RV1 for 40 mV across the resistors.
   B. With unit off, remove jumper between PC board terminals E and E, and connect ammeter, set to 100 mA range. Turn unit on and let it idle at least one minute. Adjust RV1 for 40 mA.
5) Perform the same procedure for the right channel, except measure voltage across R38 to R40 (voltmeter bias test point, right channel) or replace jumper from D to D with ammeter. Adjustment is made with RV2.
6) Leave the receiver on for about 30 minutes, then recheck measurement. A tolelance of ±25% is acceptable. Readjust if necessary.

Power Meter Calibration

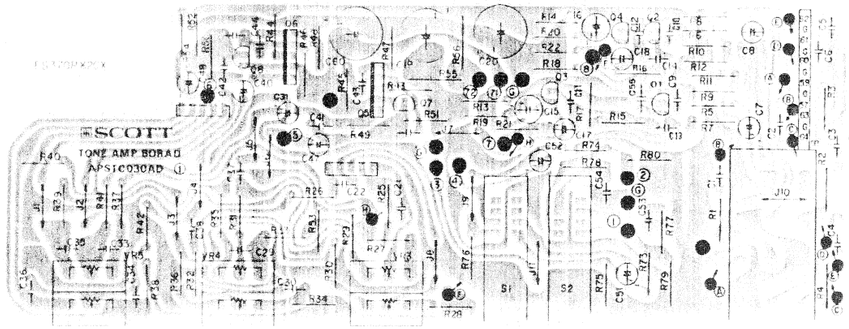
1) Connect the audio signal generator to the receiver and apply 1 kHz signal to Aux input, left channel.
2) Connect voltmeter across the left channel load resistor.
3) Turn power on.
4) Adjust the signal generator output so as to obtain 2.83 volts on the voltmeter.
5) Check that the left channel meter indicates 1 watt. If not, adjust RV3.
6) Perform above steps on the right channel, adjusting RV4, if necessary.

Adjustment Location (Audio Section)

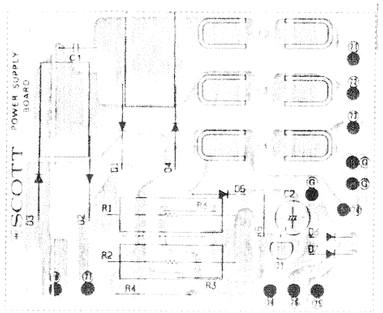

Volt Meter Bias Test Point (Right Ch.)
Bias Adjust (Right Ch.)
Bias Adjust (Left Ch.)
Volt Meter Bias Test Point (Left Ch.)
Ammeter Bias Test Point (Right Ch.)
Meter Adjustment (Right Ch.)
(Left Ch.)
Ammeter Bias Test Point (Left Ch.)
SCOTT

PARTS LOCATION DIAGRAM

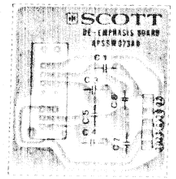
PSTC030COX, AF Control Section



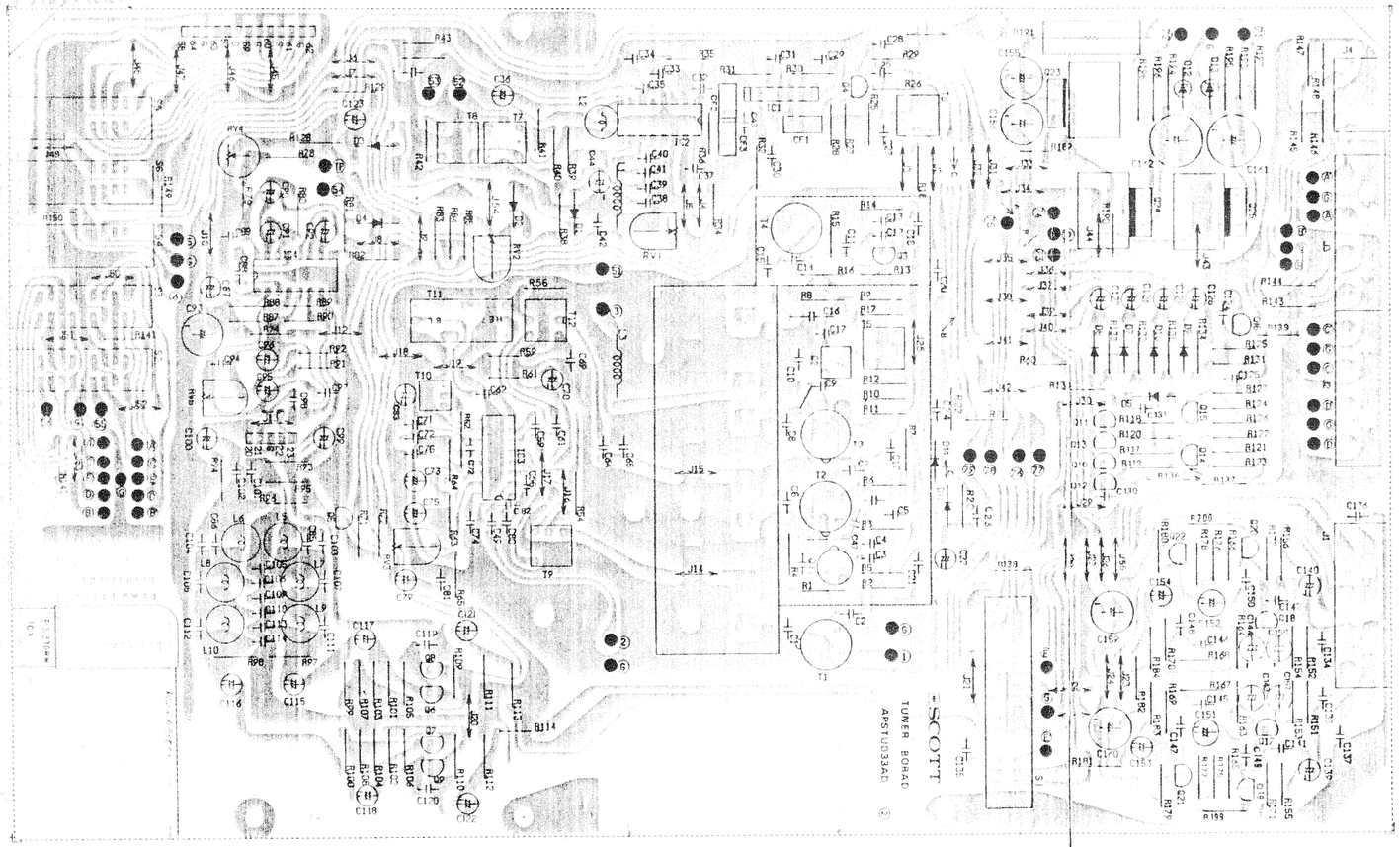
PSPW033COX, Power Supply



PSSW073COX, De-emphasis Switch
(European version only)

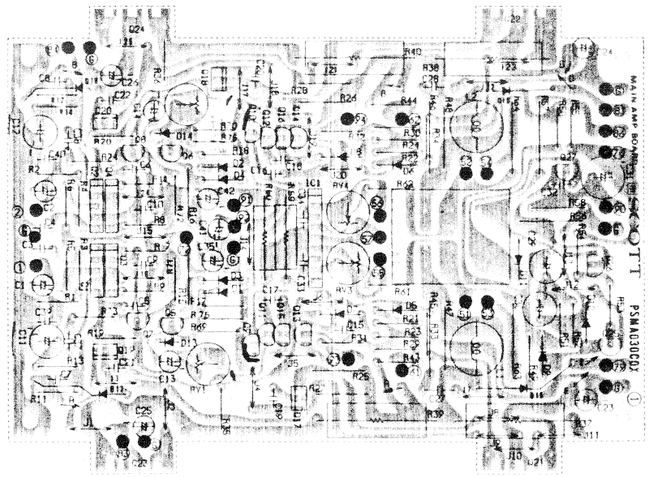


PSTU033COX, AM/FM Section

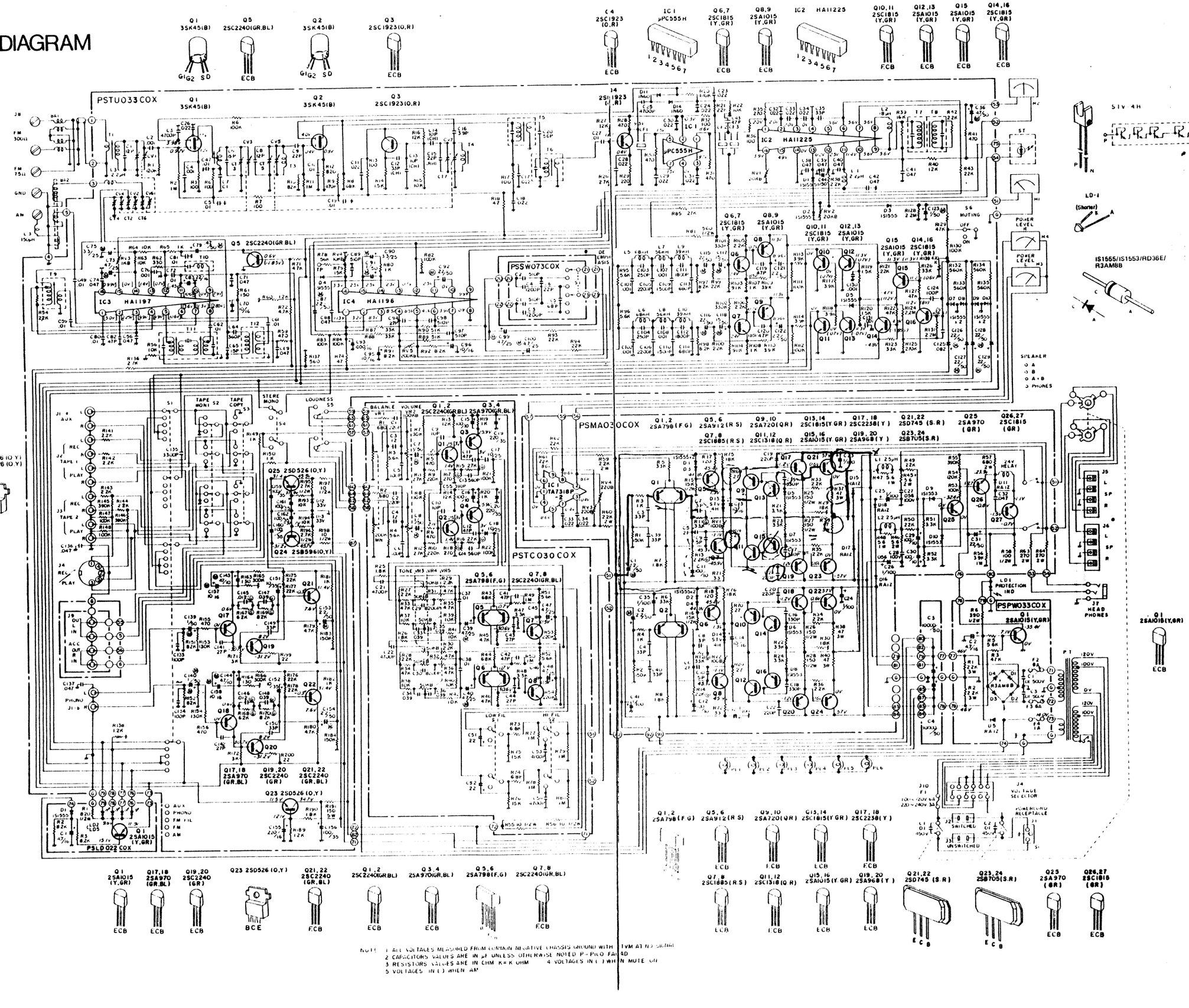


PSLD022COX, Program Indicators

PSMA030COX, AF Power Amplifier

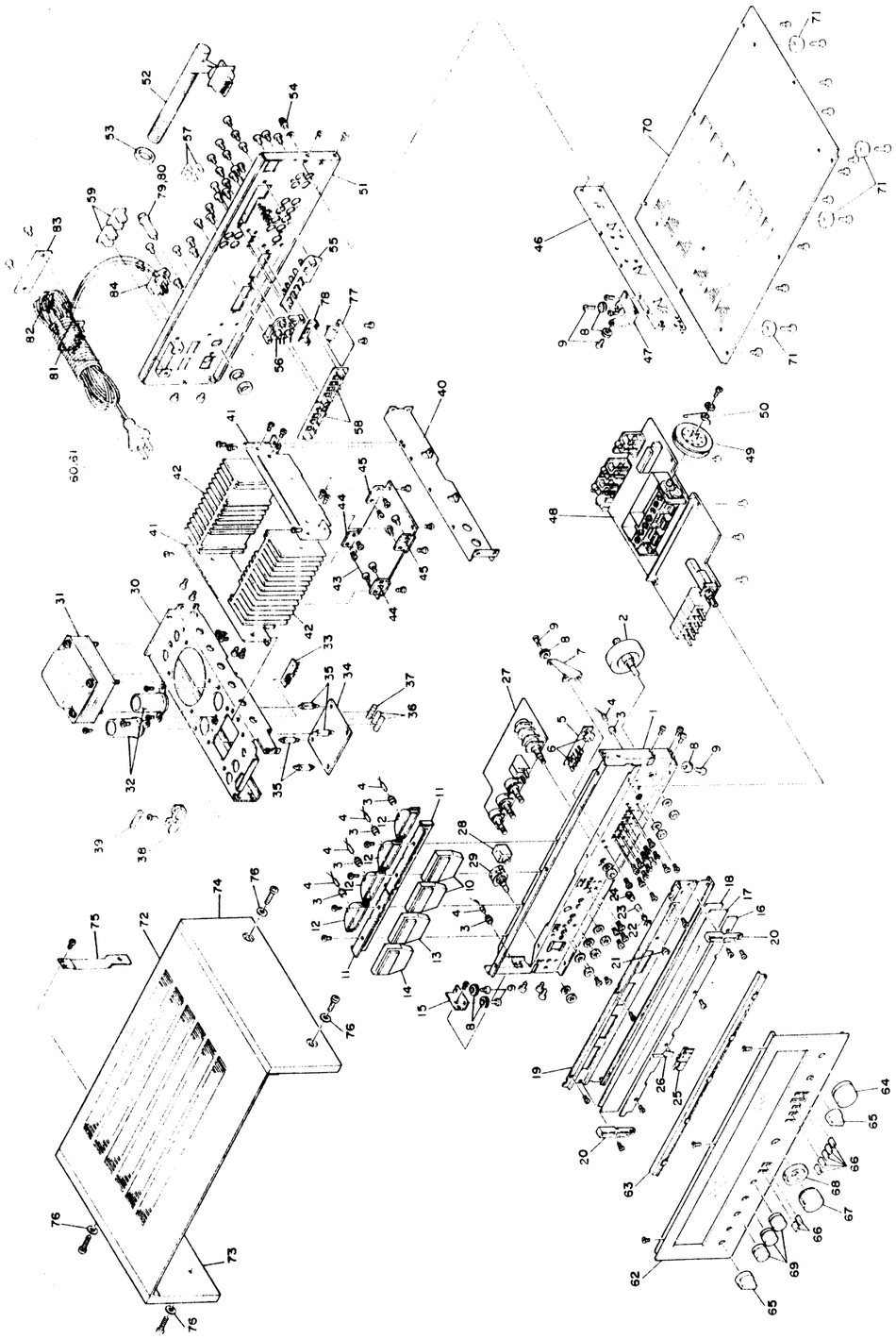


SCHEMATIC DIAGRAM



NOTE 1 ALL VOLTAGES MEASURED FROM COMMON NEGATIVE CHASSIS GROUND WITH TVM AT NO SIGNAL
2 CAPACITORS VALUES ARE IN μF UNLESS OTHERWISE NOTED P=PICO FARAD
3 RESISTORS VALUES ARE IN OHM K=K OHM 4 VOLTAGES IN ( ) WHEN MUTE ON
5 VOLTAGES IN ( ) WHEN AM

EXPLODED VIEW



Halftoned parts are for US/Canada version units.

REPLACEMENT PARTS LIST

PSMA030COX

Symbol No.	Description		Part Code
C19-22	Ceramic capacitor,	220pF 50V	CCFB221KOT
C5, 6	,,	2pF 50V	CCGB020COT
C7, 8	,,	3pF 50V	CCGB030DOT
C9, 10	,,	5pF 50V	CCGB050COT
C3, 4, 39, 40	,,	33pF 50V	CCGB330KOT
C1, 2	Electrolytic capacitor,	2.2μF 50V(M)	CEAG2R2ZMN
C3, 4	,,	33pF 50V	CEJ1610305
C11, 12, 29-31	,,		CEWC101ALX
C13, 14	,,		CEWD100ALX
C23-26, 35, 41, 42	,,		CEWK010ALX
C15-18	Ceramic capacitor,		CKGB331KBT
C33, 34	Mylar capacitor,	0.022μF 50V	CQMB223KTH
C32	,,	0.047μF 50V	CQMB473KTH
C27, 28	Polypropylene capacitor,	0.056μF 100V	CQMC563KFH
L1, 2	Choke coil, SP output,	2.5 μH	LA3QH1323B
D11-18	Silicon diode,	RA-1Z	QDSRA1ZXXD
D5-10	,,	1S1553	QDSS1553XT
D1-4	,,	1S1555	QDSS1555XT
IC1	IC	TA7318	QQM07318AT
Q9, 10	Transistor,	2SA720 (Q, R)	QTAC720XBN
Q1, 2	,,	2SA798 (F, G)	QTA0798XFE
Q5, 6	,,	2SA912	QTA0912XAN
Q19, 20	,,	2SA968	QTAC968XBT
Q25	,,	2SA970 (GR)	QTAC970XBT
Q15, 16	,,	2SA1015 (Y, GR)	QTA1015XAT
Q11, 12	,,	2SC1318 (Q, R)	QTC1318XDN
Q13, 14	,,	2SC1815 (Y, GR)	QTC1815XAT
Q26, 27	,,	2SC1815 (GR)	QTC1815XBT
Q7, 8	,,	2SC1885 (R, S)	QTC1885XAN
Q17, 18	,,	2SC2238 (Y)	QTC2238XBT
R58	MOF resistor,	1/2W, 100 Ohm	RGHANJ101N
R25-28	,,	1/2W, 150 Ohm	RGHANJ151N
R15, 16	,,	1/2W, 15K Ohm	RGHANJ153N
R56	,,	1W, 3.9K Ohm	RG1ANJ392N
R59, 60	,,	2W, 2.2K Ohm	RG2ANJ222N
R63, 64	,,	2W, 270 Ohm	RG2ANJ271N
R57	,,	2W, 680 Ohm	RG2ANJ681N
RV1, 2	Trimming resistor,	100 Ohm A-curve	RPJNB10103
RV3, 4	,,	220 Ohm A-curve	RPJNB22101
R47, 48	MOF resistor,	1W, 5.6 Ohm	RS1ANJ5R6N

Symbol No.	Description	Part Code
R45, 46	MOF resistor, 2W, 5.6 Ohm	RX2ANJ5R6N
RY1	Relay, protection	ZRA144103U

PSPW033COX

C2	Electrolytic capacitor, 4.7μF, 16V	CEWD470ALX
C1, 3	Ceramic capacitor, 0.01μF, 500V	CKDF103PEM
D5	Silicon diode RA-1Z	QDSRA1ZXXD
D1-4	,, R3-AM8B	QDSR3AM8BE
Q1	Transistor, 2SA1015 (Y, GR)	QTA1015XAT
R6	MOF resistor, 1/2W, 390 Ohm 5%	RGHANJ391N
R1, 2	,, 3W, 2.2K Ohm 5%	RG3ANJ222N
	Fuse holder, direct wiring	YHF0P0003Z

PSSW073COX [European Version only]

C6	Ceramic capacitor, 22pF, 50V	CCGB220KOT
C5	,, 68pF, 50V	CCGB680KOT
C3	Mylar capacitor, 1200pF, 50V	CQMB122JEH
C4	,,	CQMB122JEH
C1, 2	Styroflex capacitor, 510pF, 100V	CQSC511JCF
S1	Sliding switch,	SS040305ZL

PSTU033COX

C13, 14	Ceramic capacitor 10pF, 50V	CCDB100DCM
C1, 8	,, 12pF, 50V	CCDB120KOM
C6	,, 15pF, 50V	CCDB150KOM
C15	,, 22pF, 50V	CCDB220KRM
C9	,, 22pF, 50V	CCDB220KOM
C20	,, 56pF, 50V	CCDB560KOM
C12	,, 33pF, 50V	CCFB330KCT
C124, 133, 134	,, 100pF, 50V	OT
C65	,, 15pF, 50V	CCGB150KOT
C94, 141, 142	,, 27pF, 50V	CCGB270KOT
C35, 149, 150	,, 33pF, 50V	CCGB330KOT
C43, 82, 119, 120	,, 47pF, 50V	CCGB470KOT
C44	Electrolytic capacitor, 1μF, 50V (NLL)	CEAG010ALX
C143, 144	,, 47μF, 10V (M)	CEEC470ZMN
C157, 158	,, 10μF, 16V (M)	CEED100ZMN

Symbol No.	Description		Part Code
C93	Electrolytic capacitor,	1000μF, 16V (NLL)	CEED102ALX
C155	,,	220μF, 16V (NLL)	CEED221ALX
C121, 122	,,	2.2μF, 25V (M)	CEEE2R2ZMN
C75, 90	,,	3.3μF, 25V (M)	CEEE3R3ZMN
C73	,,	4.7μF, 25V (M)	CEEE4R7ZMN
C159-162	,,	100μF, 35V (NLL)	CEEF101ALX
C117, 118	,,		CEEGR15ZMN
C92, 115, 116, 126-129	,,		CEEGR15ZMN
C36, 79	,,	0.47μF, 50V (M)	CEEGR47ZMN
C123	,,	0.1μF, 50V (M)	CEEG0R1ZMN
C156	,,	1μF, 50V (NLL)	CEEG010ALX
C91, 130, 140	,,	1μF, 50V (M)	CEEG010ZMN
C87, 153, 154	,,	2.2μF, 50V (M)	CEEG2R2ZMN
C70, 95, 96	,,	10μF, 16V	CEVD100ALX
C83, 99, 100	,,	22μF, 16V	CEVD220ALX
C151, 152	,,	10μF, 16V	CEVF100ALX
C16	Minic capacitor,	3.9pF, 500V	CG2H3R9KNN
C2, 4	Ceramic capacitor,	1,000pF, 50V	CKDB1027FM
C3, 25	,,	4,700pF, 50V	CKDB472ZFM
C5, 7, 10, 19, 27, 49, 59, 61, 62, 80	,,	0.01μF, 50V	CKFB103ZFT
C11, 17, 18, 23, 24, 26, 28-34	,,	0.022μF, 50V	CKFB223ZFT
C136	,,	0.047μF, 50V	CKFB473ZFT
C38-42, 56, 69, 71, 74, 88, 136	,,	,,	CKFB473ZFT
C101, 102	,,	1,000pF, 50V	CKGB102KBT
C76	Mylar capacitor	1,000pF, 50V	CQMB102KEH
C72, 81, 130, 131	,,	0.01μF, 50V	CQMB103KFH
C145, 146	,,	0.012μF, 50V (AWS)	CQMB123GEH
C109, 110	,,	0.15μF, 50V	CQMB152JEH
C105	,,	0.22μF, 50V	CQMB222JEH
C106	,,	,,	CQMB222JEH
C135	,,	3,300pF, 50V	CQMB332KEH
C147, 148	,,	0.039μF, 50V	CQMB393GEH
C125	,,	0.082μF, 50V	CQMB823KEH
C107, 108	Styroflex capacitor,	0.001μF, 100V	CQSC102JCF
C111, 112	,,	1,800pF, 100V	CQSC182JCF
C103, 104	,,	,,	CQSC251JCF
C64	,,	360pF, 100V	CQSC361JCF
C89, 97, 98	,,	510pF, 100V	CQSC511JCF
C113, 114	,,	680pF, 100V	CQSC681JCF
CV1-6	Variable capacitor,	tuning	CVA3433G02

Symbol No.	Description		Part Code
T11	IFT + ceramic filter,	455 kHz	FBR455A18Q
CF1	Ceramic filter, 455 kHz		FB10R7F14M
CF2, 3	,,		FB10R7F15M
L1, 2	RFC		LCADA3038A
L9, 10	,,		LCADA3038A
L7, 8	,,		LF563JC01K
L5, 6	,,		LF683JC04K
D11, 14	Ceramic diode,	1N60	QDG1N60XXT
D1-10	,,	1S7555	QDSS1555XT
D12, 13	Zenner Diode		QDZRD36FCA
IC4	IC,	HA1196	QQMA1196AB
IC3	,,	HA1197	QQMA1197AB
IC1	,,	MU-PH555	QQM00555BA
IC2	,,	HA11225	QQM11225AB
Q17, 18	Transistor,	2SA970 (BL, GR)	QTA0970XAT
Q8, 9, 12, 13, 15	,,		QTA0970XAT
Q24	,,	2SB596 (O, Y)	QTB0596XAT
Q6, 7, 10, 11, 14, 16	,,	2SC1815 (Y, GR)	QTC1815XAT
Q3, 4	,,	2SC1923 (O, R)	QTC1923XAT
Q5, 21, 22	,,	2SC2240 (GR, BL)	QTC2240XAT
Q19, 20	,,		QTC2240XCT
Q23, 25	,,	2SD526 (D, Y)	QTD0526XAT
Q1, 2	,,	3SK45 (B)	QTL0045XAB
R191	Cement resistor,	150 Ohm	RF05SK151B
R195, 196	MOF resistor,	1/2W, 2.7K Ohm	RGHAPJ272B
R81	,,	1/2W, 560 Ohm	RGHAPJ561N
RV3	Trimming resistor,	1K Ohm A-curve	RPGNB10201
RV1	,,	10K Ohm A-curve	RPGNB10301
RV2	,,	20K Ohm A-curve	RPGNB20301
RV5	,,	200K Ohm A-curve	RPGNB20401
RV4	,,	10K Ohm A-curve	RPJNB10302
R197, 198	MOF resistor,	1/2W, 10 Ohm	RXHAPJ100N
S1	Rotary switch		SH040509UN
S4-6	Lever switch		SL020215ZB
S2, 3	Slide switch		SL040304ZB
T1	RFC		TRA7JZ007S
T10	IFT		TR07BM001M

Symbol No.	Description	Part Code
T5, 6	JFT	TR10MA013S
T7	,,	TR10MM013M
T8	,,	TR10MM014M
T9	RFC	TR10MN006M
T2	,,	TR10MQ002M
T3	,,	TR10MQ003M
T4	,,	TR10MQ004M
T12	,,	TR10MZ002M
J4	Din jack, 5 pin	YJD05S011Z
J1	RCA Jack, 4 pin	YJP04S016U
J2	,,	YJP04S016U
J3	,,	YJP04S016U

PSLD022COX

C1	Electrolytic capacitor, 4.7μF, 25V (NLL)	CEEE4R7ALX
C2	Ceramic capacitor, 0.022μF, 50V	CKFB223ZFT
D1	Silicon diode, 1S1555	QDSS1555XT
LD1-4	LED	QLAR5531KR
Q1	Transistor, 2SA1015 (Y, GR)	QTA1015XAT
R1	MOF resistor, 1/2W, 820 Ohm	RGHANJ821N

PSTC030AOX

C1, 2	Ceramic capacitor,	220pF, 50V	CCFB221KOT
C55	,,	390pF, 50V	CCFB391KOT
C13, 14	,,	560pF, 50V	CCFB561KOT
C9, 10	,,	10pF, 50V	CCGB100DOT
C5, 6	,,	100pF, 50V	CCGB101KOT
C43, 44	,,	27pF, 50V	CCGB270KOT
C11, 12, 41, 42	,,	47pF, 50V	CCGB470KOT
C31, 40	Electrolytic capacitor,	4.7μF, 25V (M)	CEEE4R7ZMN
C19, 20	,,	220μF, 35V (NLL)	CEEF221ALX
C51, 52	,,	0.22μF, 50V (M)	CEEGR22ZMN
C7, 8	,,	1μF, 50V (M)	CEEG010ZMN
C15, 16	,,		CEVC101ALX
C17, 18	,,		CEVE100ALX
C47, 48	,,		CEVE4R7ALX
C37, 38	Mylar capacitor,	0.01μF, 50V	CQMB103KEH

Symbol No.	Description	Part Code
C3, 4	Mylar capacitor, 0.12μF, 50V	CQMB124KFH
C33-36	,, 0.039μF, 50V	CQMB393KEH
C21, 22, 53, 54	,, 4,700pF, 50V	CQMB472KEH
C29, 30	,, 8,200pF, 50V	CQMB822KEH
Q5, 6	Transistor, 2SA798 (F, G)	QTA0798XEE
Q3, 4	,, 2SA970 (BL, GR)	QTA0970XAT
Q1, 2, 7, 8	,, 2SC2240 (GR, BL)	QTC2240XAT
VR1, 2	VR, 200K Ohm	RVGA204X07
VR3-5	,, 50K Ohm	RVQA503B05
R55, 56	MOF resistor, 1/2W, 10 Ohm	RXHANJ100N
S1	Lever switch, Low Fil	SL020215ZB
S2	,, , Hi Fil	SL020218ZB

Main Chassis

C3, 4	Electrolytic capacitor, 10,000μF, 50WV	CEJ1G10305*
C5	Ceramic capacitor, 0.047μF, 50V	CKFB473ZFT
C1, 2 (Europe)	Oil-paper capacitor, 0.01, 450V	CNST103MAN
C1 (US/Canada)	Ceramic capacitor, 4,700p, 1.4kV	CKDX472PMM
L2	RFC, 2.2μH	LCADA3038A
L1	,,	LF151KA01T
LD1	LED, Protection	QLAGD4505R
Q23, 24	Transistor, 2SB705 (S, R)	QTB0705XAA
Q21, 22	,, 2SD745 (R, S)	QTD0745XAA
D13, 14	Tr diode, quadruple, STV-4H (G, W)	QVFSTV4HXD
S1 (US/Canada)	Rotary switch, Power, UL listed	SU025108SA
S2 (Europe)	,, , ,, , SEMKO listed	SU025107SA
BA2	Loopstick antenna	TEAR155E01
PT (US/Canada)	Power transformer	TPAA5A003Y
PT (Europe)	,,	TPAA5V001Y
BA1	FM 300 Ohm balance coil	TV750301A2
J10	Fuse holder, AC, UL listed	YHF1S3001U
J2, 3	AC receptacle	YJA020005U
J1	,,	YJA03S002U
J11	RCA jack, 4 pin	YJP04S011U
J7	Headphone jack, 3 conductor, 1/4"	YJS03S016Z

Symbol No.	Description	Part Code
J4 (Europe only)	Jack, Voltage selector	YJZ10S001U
P1 (Europe only)	Plug, Voltage selector	YPZ06S004U
F1	Fuse, US/Canada; 5A, UL listed	ZFBQ50201U
	,, , Europe; 2.5A	ZFBQ25202Z
F2, 3	,, , US/Canada; 6A, UL listed	ZFBQ60203U
	,, , Europe; 6A	ZFBQ25202Z
		ZFBQ60201Z
F4	,, , US/Canada; 1A, UL listed	ZFBQ10202U
	,, , Europe; 1A	ZFBQ10203Z
M3, 4	Meter, power output	ZMD2052K01
M1, 2	Meter, FM center-tuning	ZMG2052N02
PL1-6	Lamp	ZPA118103U

Mechanical

	Escutcheon	AM370R**01
	Tuning flywheel assembly	AVFLYWL009
	Rear panel	MB972SM019
	Front chassis	MB974SZ005
	Cabinet cover	MB983SX002
	Dial plate	ME96EAA006
	Dial pointer	MJ311BC002
	Knob	MN276XA020
	,,	MN296XA002
	,,	MN296XA003
	,,	MN376AA019
	,,	MN386AA026
	Bottom plate	MS986SZ016
	Chassis	MU865SZ003
	Knob	VN360SX001
	Operation manual	KT370R**AE
	Carton	KP370R**01